UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/381,828	11/24/1999	ROLF SKOLD	2964-102P	4478

7590 01/18/2002

BIRCH STEWART KOLASCH & BIRCH
PO BOX 747
FALLS CHURCH, VA 220400747

EXAMINER
SODERQUIST, ARLEN

ART UNIT	PAPER NUMBER
1743	10

DATE MAILED: 01/18/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

MF-10

Office Action Summary

Application No.	Applicant(s)
09/381,828	Skold
Examiner	**Art Unit**
Arlen Soderquist	1743

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *Nov 5, 2001*.

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-10* is/are pending in the application.

4a) Of the above, claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-10* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

a) ☒ All b) ☐ Some* c) ☐ None of:

1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

15) ☒ Notice of References Cited (PTO-892)
16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____
18) ☐ Interview Summary (PTO-413) Paper No(s). _____
19) ☐ Notice of Informal Patent Application (PTO-152)
20) ☐ Other:

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

2. Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Franchini in view of Martin (both newly cited and applied). In the paper Franchini teaches an approach to the problem of the dependence of the dissociation constant of weak electrolytes on the temperature and on the solvent composition in the ethane-1,2-diol-2-methoxyethanol solvent system. This empirical approach to clarify the problem of the dependence of the dissociation constants of weak electrolytes on temperature and composition of mixed solvents systems (X) is applied to the dissociation constant of picric acid in ethane-1,2-diol, in 2-methoxyethanol and in their binary mixtures. The data are those of previous work (recalculated by means of the more accurate Fuoss-Hsia equation) integrated by the experimental data relative to 3 new mixtures. Two equations of the dependence of K on T and of K on X, respectively, were suggested and good accordance between experimental and calculated values are shown. Starting from the 2 above-mentioned equations, general empirical equations for the surface K(T,x) are proposed; the average difference between calculated and experimental K values is ~8%. A three-dimensional plot of the function K = K(T,X, figure 3) is presented. In the procedure section of page 1698, Franchini teaches that the solutions of picric acid of different concentrations were made by

successive dilution of stock solutions. Franchini does not teach automated control of the dilutions.

In the abstract Martin discusses quantitation of metals in liquid samples by computer intelligent flow injection inductively coupled plasma emission spectrometry. With the advent of commercial flow-injection equipment, the means became available for the automated computer-intelligent sample handling for inductively coupled plasma (ICP) analysis. A system is described, which consists of a 36-channel ARL 34000 ICP spectrometer and a FIAtron SHS-300 flow injection instrument. The functions that the system will perform include (1) automatic analysis of undiluted samples with sample introduction by flow injection, (2) automatic operator-selectable fixed dilution and analysis of samples, (3) automatic analysis of samples using computer-guided sequential dilutions to place all elements within the optimum calibration curve range, (4) the use of merging streams to achieve sample dilutions of ~200-fold, and (5) the automatic addition of standards to a sample and then sample analysis for a standard addition study. By use of the automatic sample changer, up to 76 samples of widely varying concentrations may be analyzed completely without operator intervention. Furthermore, all analyses will be made within the optimum calibration curve range for each element. Additional benefits of the flow-injection system include improved plasma stability, improved system precision and accuracy, and lower detection limits for many elements. The means by which these operations can be performed is described, and data are presented from the development and use of the system.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate automated control of the successive dilutions of Franchini according to the teachings of Martin because of the flexibility of sample dilutions to include no operator intervention and addition of standards to assist in the analysis. Additionally the Courts have held that providing a mechanical or automatic means to replace manual activity which accomplishes the same result is within the skill of a routineer in the art (see *In re Venner*, 120 USPQ 192 (CCPA 1958)).

3. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection. It is noted that the withdrawal of the previous rejections is not due to the arguments of applicant, but rather due to the closeness to the claimed invention of the newly cited and applied Franchini reference.

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The cited art relates to automated dilutions and studying liquids or mixtures using graphoanalytical methods.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Arlen Soderquist whose telephone number is (703) 308-3989. The examiner's schedule is variable between the hours of about 5:30 AM to about 5:00 PM on Monday through Thursday and alternate Fridays.

For communication by fax to the organization where this application or proceeding is assigned, (703) 305-7719 may be used for official, unofficial or draft papers. When using this number a call to alert the examiner would be appreciated. Numbers for faxing official papers are 703-872-9310 (before finals), 703-872-9311 (after-final), 703-305-7718, 703-305-5408 and 703-305-5433. The above fax numbers will generally allow the papers to be forwarded to the examiner in a timely manner.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Arlen Soderquist

January 15, 2002

ARLEN SODERQUIST
PRIMARY EXAMINER